

MIXTURE OF CARBOL FUCHSIN AND ALCIAN BLUE STAINING OF GASTRIC TISSUE FOR THE IDENTIFICATION OF *HELICOBACTER PYLORI* AND GOBLET CELL INTESTINAL METAPLASIA

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Abstract. The purpose of this study was to evaluate the role of the mixture of carbol fuchsin and alcian blue stain in the diagnosis of *Helicobacter pylori* (HP) and goblet cell intestinal metaplasia (IM) in comparison to the more commonly used Giemsa and hematoxylin and eosin (H&E) stains. Pathological blocks of gastric tissues obtained from January 2006 to December 2007 were recut and processed for Giemsa and a mixture of carbol fuchsin and alcian blue stains. Clinical data regarding the patients were collected and previous slides stain with H&E from gastric tissues were reviewed. The Giemsa and the mixture of carbol fuchsin and alcian blue stains were studied by a pathologist who was blinded to the pathological and clinical data. Direct comparisons were made between the stains for diagnosis of HP. Of 423 cases studied the concordance rate was 97.8% (kappa value=0.947, $p < 0.05$). Using the mixture of carbol fuchsin and alcian blue stain, 4.3 % of goblet cell IM which were not detected by H&E stain were additionally identified. The prevalences of HP infection diagnosed by Giemsa, the mixture of carbol fuchsin and alcian blue, and H&E stains were 72.1%, 72.3%, and 71%, respectively. In conclusion, the mixture of carbol fuchsin and alcian blue stain can be used in place of Giemsa stain for the identification of HP, and is probably preferable because of its low cost and is less time-consuming. Carbol fuchsin and alcian blue which are commonly available dyes are more beneficial than Giemsa stain and aid in identifying goblet cell IM undiagnosed by conventional H&E stain.

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